

REMARKS

Upon entry of this amendment, claims 1-5 and 15-21 are all the claims pending in the application. Claims 6-11, 13 and 14 have been canceled by this amendment, and claims 16-21 have been added as new claims. No new matter has been added.

I. Claim Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1, 4, 5 and 13-15 under 35 U.S.C. § 102(b) as being anticipated by Lind (U.S. 3,541,451).

Claim 1 recites the feature of a control circuit that controls a capacitance value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of a signal generator constant. Applicants respectfully submit that Lind does not disclose or suggest such a feature.

Regarding Lind, Applicants note that this reference discloses an FM receiver circuit that includes a variable center frequency filter 14 disposed between a mixer stage and an intermediate frequency amplifier stage (see col. 2, lines 6-9). As shown in Figs. 1a and 1b of Lind, the mixer stage includes an RF amplifier 11, a local oscillator 13, and a mixer 12; the filter 14 includes a pair of voltage sensitive capacitors 37 and 45; and the IF amplifier stage includes an IF amplifier 15 and a demodulator 17 (see col. 3, lines 36-49).

As shown in Fig. 1b of Lind, an automatic gain control (AGC) bus 23 is connected to the IF amplifier 15, and the output of the demodulator 17 is connected to an automatic frequency control (AFC) bus 20.

As explained in Lind, the exact center frequency provided by the variable center frequency filter 14 is determined by the signal supplied by the AFC bus 20 to the variable

capacitors 37, 45 (see col. 3, lines 62-65). In particular, it is disclosed in Lind that the magnitude of the demodulated or audio signal on the AFC bus 20 serves to shift the center frequency of the variable center frequency filter 14 so that its passband is centered at a point synchronized with the instantaneous intermediate frequency (see col. 3, line 72 - col. 4, line 1).

Accordingly, in Lind, as the capacitance of the variable capacitors 37, 45 is controlled so as to change the center frequency of the variable center frequency filter 14, Applicants respectfully submit that Lind does not in any way whatsoever disclose that the capacitance of the variable capacitors is controlled so as to make a cutoff frequency or a resonance frequency of a signal generator constant.

In the Office Action, the Examiner has taken the position that a control circuit in Lind, which is not shown in the drawings or described therein, is inherently capable of performing the above-noted function of controlling a value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of the signal generator constant. Applicants respectfully disagree.

As discussed above, Lind explicitly describes that the capacitance of the variable capacitors 37, 45 is controlled so as to change the center frequency of the variable center frequency filter 14. Thus, while any control circuit that may be present in Lind would clearly be structured so as to control the capacitance of the capacitors so as to change the center frequency of the variable center frequency filter, Applicants respectfully submit that there is absolutely no evidence that such a control circuit in Lind would be structured so as to inherently include the ability to control a capacitance value of a variable capacitor so as to make a cutoff frequency or a resonance frequency of a signal generator constant, as recited in claim 1.

In view of the foregoing, Applicants respectfully submit that Lind does not disclose, suggest or otherwise render obvious at least the above-noted feature recited in claim 1. Accordingly, Applicants submit that claim 1 is patentable over Lind, an indication of which is kindly requested.

Claims 4, 5 and 15 depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

II. Claim Rejections under 35 U.S.C. § 103(a)

A. The Examiner has rejected claims 2, 3, 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Lind (U.S. 3,541,451).

Claims 2 and 3 depend from claim 1. As noted above, Applicants respectfully submit that Lind does not disclose, suggest or otherwise render obvious all of the features recited in claim 1. Accordingly, Applicants submit that claims 2 and 3 are patentable at least by virtue of their dependency. As noted above, claims 6 and 7 have been canceled by this amendment.

B. The Examiner has rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of El-Hamamsy (U.S. 5,463,285). As noted above, claim 8 has been canceled by this amendment.

C. The Examiner has rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of Shenai (U.S. 5,914,513). As noted above, claim 9 has been canceled by this amendment.

D. The Examiner has rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of JP 06-170368. As noted above, claim 10 has been canceled by this amendment.

E. The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of Ogawa (U.S. 4,758,794). As noted above, claim 11 has been canceled by this amendment.

III. New Claims

Regarding new claim 16, Applicants note that this claim is similar to claim 1, but has been written using a means-plus-function limitation which sets forth a control means for controlling an output amplitude of said signal generator and for controlling a capacitance value of said variable capacitor so as to make a cutoff frequency or a resonance frequency of said signal generator constant.

Regarding means-plus-function limitations, Applicants note that MPEP § 2182 explains that “the application of a prior art reference to a means or step plus function limitation requires that the prior art element perform the identical function specified in the claim (emphasis added).”

For the reasons discussed above with respect to claim 1, Applicants respectfully submit that Lind clearly does not perform the identical function set forth in new claim 16 of “controlling a capacitance value of said variable capacitor so as to make a cutoff frequency or a resonance frequency of said signal generator constant.”

In view of the foregoing, Applicants submit that new claim 16 is patentable over Lind, an indication of which is respectfully requested. Claims 17-21 depend from claim 16 and are therefore considered patentable at least by virtue of their dependency.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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